



Dart Aerospace Ltd.
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Tel (613) 632-5200

D350-636-012
Job Sheet 176617



Part No: D350-636-012

Job Qty: 1 ea

Part Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 4/26/18

Job Tracking No:

Due Date: 5/21/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG D3492 REV E SHEET 1, D2750-042 REV G SHEETS 1,2,5,9 IPP Rev:I 02.09.25 IPP Rev:J 06-03-23 As per Rev D IPP Rev:K 06-07.13 As per dsi9343 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verf:EC IPP Rev:M 08-04-22 DD verified:EC IPP Rev:N 08-09-23 revF DD verified:ec IPP Rev:O 09-02-06 per PAR09-010 DD verf:EC IPP Rev:P 10.06.22 revise seq110 DD verf:EC IPP Rev:Q 10.10.01 as per IIN revH DDverf:EC IPP REV:R 13.08.27 PER ECN13-594 DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		5/21/18	0.00	0.00	Start Up Skid tubes-1		MC
110	Skid tubes	1 pcs		5/21/18	0.00	4.36	Skid tubes-4		MC, DC, DD
120	QC	1 pcs		5/21/18	0.00	0.00	QC10		38, DAS
130	QC	1 pcs		5/21/18	0.00	0.00	QC5		9-85, 38
140	HandFinish	1 pcs		5/21/18	0.00	0.91	HandFinish1		SA 18-06-18
150	QC	1 pcs		5/21/18	0.00	0.00	QC7-2		BE
160	Skid tubes	1 pcs		5/21/18	0.00	4.36	Skid tubes-1		DD, BE
170	QC	1 pcs		5/21/18	0.00	0.00	QC10		38, DAS
180	QC	1 pcs		5/21/18	0.00	0.00	QC5		9-85, 38
190	HandFinish	1 pcs		5/21/18	0.00	0.91	HandFinish2		BA 18-07-10
200	SprayPaint	1 pcs		5/21/18	0.00	0.69	Spray Paint		AB JUL 11 2018
205	Outsource	1 pcs		5/21/18			ATE003-VC		NR
210	QC	1 pcs		5/21/18	0.00	0.00	QC14		AL 18-7-12
230	HandFinish	1 pcs		5/21/18	0.00	0.91	HandFinish4		DD, 7-13
240	QC	1 pcs		5/21/18	0.00	0.00	QC5		38
250	Packaging	1 pcs		5/21/18	0.00	0.00	Packaging1-3		9-85, 11-13 2018
260	QC	1 pcs		5/21/18	0.00	0.00	QC4		51 JUL 13 2018
265	DC	1 pcs		5/21/18	0.00	0.00	DC		
270	Packaging	1 pcs		5/21/18	0.00	0.00	Packaging3-1		51 JUL 13 2018
280	QC21-FG	1 Ea		5/21/18	0.00	0.00	QC21		51 JUL 13 2018

Part Op 110 - 1- Pick D2600-3 Bent Drill pilot holes as per Dwg D2750 sheet 4 (D2750-2 details). Drill using drill Jig DT8150 & Descriptions: DT8863A for second side only DT8863B for first side (detail K) 1- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting. Open to 0.500" using hole saw. VERIFY AND RECORD FWD BEND ANGLE. 6- Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297". 7- Open up holes of Detail J to 0.297" (total of 2 holes per side) 8- Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004 9- Grind welds flush as per Dwg D2750

160 - 1- Open up holes of Detail L using hole saw and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750. 2- Open up holes of Detail K using hole saw to 0.750" (total of 4 holes per side) as per dwg D2750. 3- Open float holes using uni-bit to .500" (4 per Side) 4- Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9) 5- Deburr and blow out all chips from inside of tube 6- Prepare tube for welding, remove alodine as required. 7- Bond web D2739 in place as per QSI 015, let cure for 12hrs. A/R Sikaflex-291 batch: 138787 exp. date: 2018/12/22 ATTN: USE I-BEAM LOCATION AID (BLADE FITTING)*** 8- Weld spacers D3490-1, D3490-3

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS			
Part No. _____		Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐
NCR No. _____		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐
		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
		Large Fab ☐	Composite ☐	Supplier ☐	

Date : _____ Step #: _____ QTY Effective : _____ MRB (QSI042) Approval _____

Description Work Order Deviation

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 Email: sales@dartaero.com
 www.dartaerospace.com

Date: 08/12/18



Container No: S080250

Part: D350-636-012

Job No: 176617

Serial No/Batch: S080250

Revision:

Inspector:

Exp Date:

Instructions:

Root Cause							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐		
Design	☐	Operator	☐	Bending	☐		
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐		
Equip/Tooling	☐	Supplier	☐	Cracks	☐		
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐		
Material	☐	Use for Testing	☐	Cuffs	☐		
Internal Transport	☐	Poor Information	☐	Crushing	☐		
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐		
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐		
Substation	☐	Process Improvement	☐	Marks/Chatter	☐		
Past Expiry Date	☐	Manufacturing Process	☐				
Misidentified	☐	Past Due	☐	OTHER :			

and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9) A/R Aluminum Rod batch: 138834 9- At section AP-AP drill out x-bolt spacer to 0.404" 10-Grind welds flush as per Dwg D2750 11- Spot face ground handling holes section (total of 4 places per side) as per dwg D2750 12- Deburr holes, ensure tube is free of all scratches before sending to paint.

180 - ***VERIFY C'BOARD IS GOOD***

190 - Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

200 - 1- PRIME AS PER DWG AND QSI 005 4.2 PRIMER PRC DESOTO 515X349 BATCH: 138862 2-

PAINT WHITE AS PER DWG AND QSI 005 4.2 PAINT BATCH: 138875

210 - Inspect for foreign object per QSI 024

230 - 1-Install inserts as per dwg D2750 2-Inspect for Foreign Objects 3-Install blade fitting D3488-042, wearshoes and ground handling hardware as per dwg D2750 SIKA FLEX 241 BATCH: M138787 EXP DATE: 1811

4-assemble o'ring to plug as per dwg D3492 and apply o'ring lube A/R 55-o'ring lube batch: M13884 5-Coat all exposed fasteners with "LPS Procyon" batch: M133690

265 - record fwd angle: 89.7 Photocopy blue file and type labels per PPP D350-636-012 CHG 007

270 - Package as per PPP D350-636-012

Job BOM					004391
Part / Item	Component Name	Quantity	Operation	Container	
D2600-3-BENT-RH	Extrusion Bent RH	1 Ea (1 ea)	90-Start up Operation	5073308	
D2744	Cap	1 Ea (1 ea)	110-Skidtubes	5063692	
D2739	350 I-Beam	1 Ea (1 ea)	160-Skidtubes	5081150	
D2743	Crossbolt Spacer	8 Ea (8 ea)	160-Skidtubes	5082661	
D3490-1	Cross Bolt Spacer	4 Ea (4 ea)	160-Skidtubes	5065863	
D3490-3	Cross Bolt Spacer	4 Ea (4 ea)	160-Skidtubes	5066254	
ALS4-1032-225	Rivnut	38 Ea (38 ea)	230-HandFinish	5058138	
AN3C5A	Bolt	34 Ea (34 ea)	230-HandFinish	5057153	
AN3C6A	Bolt	4 Ea (4 ea)	230-HandFinish	5076000	
AN6C44A	Bolt	4 Ea (4 ea)	230-HandFinish	5066333-1	
AN8C35A	Bolt	1 Ea (1 ea)	230-HandFinish	FM137203	
D2745	Bushing	8 Ea (8 ea)	230-HandFinish	5082484	
D3488-042	Blade Fitting RH	1 Ea (1 ea)	230-HandFinish	5070863	
D3492-1	Plug	8 Ea (8 ea)	230-HandFinish	5077552	
D3492-3	Plug	8 Ea (8 ea)	230-HandFinish	5072782	
D3535-25	Wearplate Center	1 Ea (1 ea)	230-HandFinish	5080560	
D3536-25	Gasket Center	1 Ea (1 ea)	230-HandFinish	5081731	
D3537-1	Wearpad	3 Ea (3 ea)	230-HandFinish	5070780	
D3631-1	Washer	8 Ea (8 ea)	230-HandFinish	5058407	
D3791-1	Wearpad	1 Ea (1 ea)	230-HandFinish	5071379	
D3793-1	Wearplate Fwd	1 Ea (1 ea)	230-HandFinish	5070839	
D3793-3	Wearplate Aft	1 Ea (1 ea)	230-HandFinish	5072081	
D3794-1	Gasket Fwd	1 Ea (1 ea)	230-HandFinish	5071573	
D3794-3	Gasket Aft	1 Ea (1 ea)	230-HandFinish	5046613	
MS21043-6	Nut	4 Ea (4 ea)	230-HandFinish	5076004	
MS21083C8	Nut	1 Ea (1 ea)	230-HandFinish	5056493	
NAS1149C0332R	Washer	38 Ea (38 ea)	230-HandFinish	5056046-1	
NAS1149C0832R	Washer	1 Ea (1 ea)	230-HandFinish	M138409-120	
NAS1515H3L	Washer	4 Ea (4 ea)	230-HandFinish	5036714	
NAS1611-010 <u>5622098</u> X8	Ring	8 Ea (8 ea)	230-HandFinish	5049970	
NAS1611-013 <u>5631467</u> X8	Ring	8 Ea (8 ea)	230-HandFinish	5077839	
AN8C21A	Bolt	2 Ea (2 ea)	250-Packaging	FM137162	
D2741	Replacement Blade	1 Ea (1 ea)	250-Packaging	5068565	
D3493-1	Washer	2 Ea (2 ea)	250-Packaging	5067105	
D3532-1	Spacer	2 Ea (2 ea)	250-Packaging	5062610	
MS21083C8	Nut	2 Ea (2 ea)	250-Packaging	5050016	
NAS1149D0863J	Washer	2 Ea (2 ea)	250-Packaging	F12563	

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D2600-3-BENT-RH	1	1	0
110-Skidtubes	D2744	1	87	0
160-Skidtubes	D2739	1	16	0
	D2743	8	134	0
	D3490-1	4	28	0
	D3490-3	4	11	0

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : ☐					

230-HandFinish

ALS4-1032-225	38	5,580	0
AN3C5A	34	1,993	0
AN3C6A	4	286	0
AN6C44A	4	363	0
AN8C35A	1	52	0
D2745	8	137	0
D3488-042	1	0	0
D3492-1	8	120	0
D3492-3	8	45	0
D3535-25	1	27	0
D3536-25	1	35	0
D3537-1	3	126	0
D3631-1	8	955	0
D3791-1	1	23	0
D3793-1	1	11	0
D3793-3	1	19	0
D3794-1	1	24	0
D3794-3	1	32	0
MS21043-6	4	212	0
MS21083C8	1	137	0
NAS1149C0332R	38	6,209	0
NAS1149C0832R	1	73	0
NAS1515H3L	4	211	0
NAS1611-010	8	601	0
NAS1611-013	8	397	0
AN8C21A	2	107	0
D2741	1	54	0
D3493-1	2	34	0
D3532-1	2	46	0
MS21083C8	2	137	0
NAS1149D0863J	2	125	0

250-Packaging

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					